

COMPLETE LISTING OF CLAIMS
IN ASCENDING ORDER WITH STATUS INDICATOR

Claims 1-5 (canceled)

6. (new): Process for the oxidative conversion of hydrocarbons by contacting a hydrocarbon-containing process gas with oxygen or oxygen-containing gas in presence of a catalyst active in the oxidation of the hydrocarbon, the process comprising the steps of:

passing a process gas containing the hydrocarbon through a reaction zone with the catalyst;

introducing the oxygen or oxygen-containing gas divided into a plurality of substreams successively and gradually into the reaction zone;

within the reaction zone reacting the process gas continuously with the oxygen or the oxygen-containing gas; and

withdrawing from the reaction zone a product gas containing oxidized hydrocarbon compound and carbon monoxide,

wherein heat is transported from the reaction zone by means of surrounding the reaction zone with a bed of inert particulate heat transfer material fluidized by the oxygen or the oxygen-containing gas.

7. (new): Process of claim 6, wherein the hydrocarbon comprises n-butane or propane.

8. (new): Process of claim 6, wherein the process gas contains at least 20% by volume of an inert gas.
9. (new): Process of claim 8, wherein the inert gas is carbon dioxide.
10. (new): Process of claim 9, wherein at least part of the carbon dioxide is obtained by oxidation of carbon monoxide in the product gas.
11. (new): Process of claim 6, wherein the inert particulate heat transfer material is sand.